WHAT IS CLAIMED IS:

1. A compound of the formula (I):

(I)

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wherein:

X is -CHR₃-, -CHR₃-alkyl-, or -CHR₃-alkenyl-;

 \mathbf{R}_1 is selected from the group consisting of:

-alkenyl;

-aryl; and

-R₄-aryl;

 $\mathbf{R_2}$ is selected from the group consisting of:

-hydrogen;

-alkyl;

-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

-alkyl-Y- alkenyl;

-alkyl-Y-aryl; and

- alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

-OH;

-halogen;

 $-N(R_3)_2;$ $-CO-N(R_3)_2;$ -CO-C₁₋₁₀ alkyl; -CO-O-C₁₋₁₀ alkyl; 5 $-N_3$; -aryl; -heteroaryl; -heterocyclyl; -CO-aryl; and 10 -CO-heteroaryl; R4 is alkyl or alkenyl, which may be interrupted by one or more -O- groups; each R₃ is independently H or C₁₋₁₀ alkyl; each Y is independently -O- or -S(O)0.2-; 15 n is 0 to 4; and each R present is independently selected from the group consisting of $C_{1\text{--}10}$ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl; or a pharmaceutically acceptable salt thereof. 20 2. A compound or salt of claim 1 wherein R₁ is -alkyl-aryl. A compound or salt of claim 1 wherein R_1 is $-(CH_2)_{0-3}$ -phenyl. 3. A compound or salt of claim 1 wherein R_1 is $-(CH_2)_{0-3}$ -substituted phenyl. 25 4. 5. A compound or salt of claim 1 wherein X is -CH(alkyl)(alkyl)- wherein the alkyl groups can be the same or different. 30 6. A compound or salt of claim 1 wherein X is -CH₂-CH₂-.

A compound or salt of claim 1 wherein X is $-CH(C_2H_5)(CH_2)$ -.

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- 8. A compound or salt of claim 1 wherein R₂ is H.
- 9. A compound or salt of claim 1 wherein R₂ is alkyl.
- 10. A compound or salt of claim 1 wherein R₂ is -alkyl-O-alkyl.
- 11. A compound of the formula (II)

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10 (II)

wherein X is -CHR₃-, -CHR₃-alkyl-, or -CHR₃-alkenyl-;

 \mathbf{R}_{10} is selected from the group consisting of:

-H;

15 -alkyl;

-alkenyl; and

-aryl;

 $\mathbf{R_2}$ is selected from the group consisting of:

-hydrogen;

20 -alkyl;

-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

-alkyl-Y-alkenyl;

-alkyl-Y-aryl; and

-alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

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-OH;
                                       -halogen;
                                       -N(R_3)_2;
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                                       -CO-N(R_3)_2;
                                        -CO-C_{1-10} alkyl;
                                        -CO-O-C_{1-10} alkyl;
                                        -N_3;
                                        -aryl;
10
                                        -heteroaryl;
                                        -heterocyclyl;
                                        -CO-aryl; and
                                        -CO-heteroaryl;
                        n is 0 to 4;
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                        each Y is independently -O- or -S(O)0-2-;
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each Y is independently -O- or $-S(O)_{0-2}-$; each R_3 is independently H or C_{1-10} alkyl; and each R present is independently selected from the group consisting of C_{1-10}

alkyl, C_{1-10} alkoxy, hydroxy, halogen and trifluoromethyl;

or a pharmaceutically acceptable salt thereof.

12. A compound of claim 11 wherein R_{10} is aryl.

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- 13. A compound or salt of claim 11 wherein R_{10} is $-(CH_2)_{0-3}$ —phenyl.
- 14. A compound or salt of claim 11 wherein R_{10} is $-(CH_2)_{0-3}$ -substituted phenyl.
 - 15. A compound or salt of claim 11 wherein X is -CH(alkyl)(alkyl)-, wherein the alkyl groups can be the same or different.
 - 16. A compound or salt of claim 11 wherein X is -CH₂-CH₂-.

- 17. A compound or salt of claim 11 wherein X is $-CH(C_2H_5)(CH_2)$ -.
- 18. A compound or salt of claim 11 wherein R₂ is H.
- 5 19. A compound or salt of claim 11 wherein R_2 is alkyl.
 - 20. A compound or salt of claim 11 wherein R₂ is alkyl-O-alkyl.
 - 21. A compound of the formula (III)

$$R_n$$
 NH_2
 N
 R_2
 $X-O-R_1$
(III)

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wherein:

X is -CHR₃-, -CHR₃-alkyl-, or -CHR₃-alkenyl-;

 \mathbf{R}_1 is selected from the group consisting of:

-aryl;

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-alkenyl; and

-R₄-aryl;

 $\mathbf{R_2}$ is selected from the group consisting of:

-hydrogen;

-alkyl;

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-alkenyl;

-aryl;

-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

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-alkyl-Y-aryl;

- alkyl-Y-alkenyl; and

from the group consisting of: -OH; -halogen; $-N(R_3)_2;$ 5 $-CO-N(R_3)_2;$ -CO-C₁₋₁₀ alkyl; -CO-O-C₁₋₁₀ alkyl; $-N_3$; -aryl; 10 -heteroaryl; -heterocyclyl; -CO-aryl; and -CO-heteroaryl; R4 is alkyl or alkenyl, which may be interrupted by one or more 15 -O- groups; each R₃ is independently H or C₁₋₁₀ alkyl; each Y is independently -O- or -S(O)₀₋₂-; n is 0 to 4; and each R present is independently selected from the group consisting of C₁₋₁₀ 20 alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl; or a pharmaceutically acceptable salt thereof. A compound or salt of claim 21 wherein R_1 is $-(CH_2)_{0-3}$ —substituted phenyl. 22. 25 23. A compound or salt of claim 21 wherein R₂ is H or alkyl. A compound or salt of claim 21 wherein R₂ is -alkyl-O-alkyl. 24.

- alkyl or alkenyl substituted by one or more substituents selected

25. A compound of the formula (IV):

5 wherein: X is -CHR₃-, -CHR₃-alkyl-, or -CHR₃-alkenyl-;

 \mathbf{R}_{10} is selected from the group consisting of:

-H;

-alkyl;

-alkenyl; and

10 -aryl;

R₂ is selected from the group consisting of:

-hydrogen;

-alkyl;

-alkenyl;

15 -aryl;

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-heteroaryl;

-heterocyclyl;

-alkyl-Y-alkyl;

-alkyl-Y-aryl;

20 -alkyl-Y- alkenyl; and

- alkyl or alkenyl substituted by one or more substituents selected from the group consisting of:

-OH;

-halogen;

 $-N(R_3)_2;$

 $-CO-N(R_3)_2;$

-CO- C_{1-10} alkyl;

-CO-O-C₁₋₁₀ alkyl;
-N₃;
-aryl;
-heteroaryl;
-heterocyclyl;
-CO-aryl; and
-CO-heteroaryl;
each R₃ is independently H or C₁₋₁₀ alkyl;
each Y is independently -O- or - S(O)₀₋₂-;
n is 0 to 4; and
each R present is independently selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl;
or a pharmaceutically acceptable salt thereof.

- 15 26. A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 1 and a pharmaceutically acceptable carrier.
 - 27. A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 11 and a pharmaceutically acceptable carrier.
 - 28. A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 21 and a pharmaceutically acceptable carrier.
- 29. A method of inducing cytokine biosynthesis in an animal comprising administering
 25 a therapeutically effective amount of a compound or salt of claim 1 to the animal.
 - 30. The method of claim 29 wherein the cytokine is IFN- α .

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- 31. A method of inducing cytokine biosynthesis in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 11 to the animal.
 - 32. The method of claim 31 wherein the cytokine is IFN- α .

- 33. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 1 to the animal.
- 5 34. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 1 to the animal.

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- 35. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 11 to the animal.
- 36. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 11 to the animal.
- 37. A method of inducing cytokine biosynthesis in an animal comprising administering a theraputically effective amount of a compound or salt of claim 21 to the animal.
 - 38. The method of claim 37 wherein the cytokine is IFN- α .
- 39. A method of treating a viral disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 21 to the animal.
 - 40. A method of treating a neoplastic disease in an animal comprising administering a therapeutically effective amount of a compound or salt of claim 21 to the animal.
- 25 41. A compound of the formula (V):

$$R_n$$
 R_2
 $X-O-R_1$

(V)

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X is -CHR3-, -CHR3-alkyl-, or -CHR3-alkenyl-;
        wherein
                         \mathbf{R}_1 is selected from the group consisting of:
                                 -aryl;
                                 -alkenyl;
                                 -R4-aryl; and
 5
                                 -(CH_2)_{1-10}-C\equiv C-R_{10};
                         R<sub>2</sub> is selected from the group consisting of:
                                 -hydrogen;
                                 -alkyl;
                                  -alkenyl;
10
                                  -aryl;
                                  -heteroaryl;
                                  -heterocyclyl;
                                  -alkyl-Y-alkyl;
                                  -alkyl-Y-alkenyl;
15
                                  -alkyl-Y-aryl; and
                                  - alkyl or alkenyl substituted by one or more substituents selected
                                  from the group consisting of:
                                          -OH;
                                          -halogen;
20
                                           -N(R_3)_2;
                                           -CO-N(R_3)_2;
                                           -CO-C<sub>1-10</sub> alkyl;
                                           -CO-O-C<sub>1-10</sub> alkyl;
                                           -N_3;
25
                                           -aryl;
                                           -heteroaryl;
                                           -heterocyclyl;
                                           -CO-aryl; and
                                           -CO-heteroaryl;
30
                          R<sub>4</sub> is alkyl or alkenyl, which may be interrupted by one or more
                          -O- groups;
```

each R₃ is independently H or C₁₋₁₀ alkyl;

 \mathbf{R}_{10} is selected from the group consisting of H, alkyl, alkenyl and aryl; each Y is independently -O- or $-S(O)_{0-2}$;

n is 0 to 4; and

each R present is independently selected from the group consisting of C₁₋₁₀ alkyl, C₁₋₁₀ alkoxy, hydroxy, halogen and trifluoromethyl;

or a pharmaceutically acceptable salt thereof.

42. A compound of the formula (VI):

$$R_n$$
 N
 R_2
 $X-O-R_1$
(VI)

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X is -CHR₃-, -CHR₃-alkyl-, or -CHR₃-alkenyl-; wherein

 \mathbf{R}_1 is selected from the group consisting of:

15 -aryl;

-alkenyl;

-R₄-aryl; and

 $-(CH_2)_{1-10}-C\equiv C-R_{10};$

R₂ is selected from the group consisting of:

20 -hydrogen;

-alkyl;

-alkenyl;

-aryl;

-heteroaryl;

25 -heterocyclyl;

-alkyl-Y-alkyl;

```
-alkyl-Y-alkenyl;
                                  -alkyl-Y-aryl; and
                                  - alkyl or alkenyl substituted by one or more substituents selected
                                  from the group consisting of:
                                           -OH;
 5
                                           -halogen;
                                           -N(R_3)_2;
                                           -CO-N(R_3)_2;
                                           -CO-C<sub>1-10</sub> alkyl;
                                           -CO-O-C<sub>1-10</sub> alkyl;
10
                                           -N_3;
                                            -aryl;
                                            -heteroaryl;
                                            -heterocyclyl;
                                            -CO-aryl; and
15
                                            -CO-heteroaryl;
                           R4 is alkyl or alkenyl, which may be interrupted by one or more
                           -O- groups;
                           each R<sub>3</sub> is independently H or C<sub>1-10</sub> alkyl;
                           \mathbf{R}_{10} is selected from the group consisting of H, alkyl, alkenyl and aryl;
20
                           each Y is independently -O- or -S(O)<sub>0-2</sub>-;
                           n is 0 to 4; and
                           each I\!\!R present is independently selected from the group consisting of C_{1\text{--}10}
                           alkyl, C<sub>1-10</sub> alkoxy, hydroxy, halogen and trifluoromethyl;
                           or a pharmaceutically acceptable salt thereof.
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43. A compound of the formula (VII):

$$\begin{array}{c|c}
O & N & N \\
N & N & N \\
N & N & N \\
X-O-R_1 & N & N
\end{array}$$
(VII)

5 wherein:

X is -CHR3-, -CHR3-alkyl-, or -CHR3-alkenyl-;

 \mathbf{R}_1 is selected from the group consisting of:

-aryl;

-alkenyl;

-R₄-aryl; and

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 $-(CH_2)_{1-10}-C\equiv C-R_{10};$

 \mathbf{R}_4 is alkyl or alkenyl, which may be interrupted by one or more

-O- groups;

each \mathbb{R}_3 is independently H or \mathbb{C}_{1-10} alkyl;

 \mathbf{R}_{10} is selected from the group consisting of H, alkyl, alkenyl and aryl;

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n is 0 to 4; and

each **R** present is independently selected from the group consisting of C_{1-10} alkyl, C_{1-10} alkoxy, hydroxy, halogen and trifluoromethyl;

or a pharmaceutically acceptable salt thereof.

20 44. A compound of the formula (VIII):

$$N-(COOR_7)_2$$
 N
 R_2
 $X-O-R_1$

(VIII)

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X is -CHR<sub>3</sub>-, -CHR<sub>3</sub>-alkyl-, or -CHR<sub>3</sub>-alkenyl-;
         wherein:
                           \mathbf{R}_1 is selected from the group consisting of:
                                    -aryl;
 5
                                    -alkenyl;
                                    -R<sub>4</sub>-aryl; and
                                    -(CH_2)_{1-10}--C\equiv C-R_{10};
                           R<sub>2</sub> is selected from the group consisting of:
                                    -hydrogen;
10
                                    -alkyl;
                                    -alkenyl;
                                    -aryl;
                                    -heteroaryl;
                                    -heterocyclyl:
                                    -alkyl-Y-alkyl;
15
                                    -alkyl-Y-alkenyl;
                                    -alkyl-Y-aryl; and
                                    -alkyl or alkenyl substituted by one or more substituents selected
                                    from the group consisting of:
                                             -OH;
20
                                              -halogen;
                                              -N(R_3)_2;
                                              -CO-N(R_3)_2;
                                              -CO-C<sub>1-10</sub> alkyl;
                                              -CO-O-C<sub>1-10</sub> alkyl;
25
                                              -N_3;
                                              -aryl;
                                              -heteroaryl;
                                              -heterocyclyl;
                                              -CO-aryl; and
30
                                              -CO-heteroaryl;
```

R₄ is alkyl or alkenyl, which may be interrupted by one or moreO- groups;

each $\mathbf{R_3}$ is independently H or C_{1-10} alkyl;

 \mathbf{R}_{10} is selected from the group consisting of H, alkyl, alkenyl and aryl; each Y is independently -O- or $-S(O)_{0-2}$;

n is 0 to 4;

each R present is independently selected from the group consisting of C_{1-10} alkyl, C_{1-10} alkoxy, hydroxy, halogen and trifluoromethyl; and

R7 is tert-butyl or benzyl;

or a pharmaceutically acceptable salt thereof.

45. A compound of the formula (IX)

$$R_n$$
 C_1
 N
 R_2
 $X-O-R_1$
 (IX)

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wherein:

X is -CHR3-, -CHR3-alkyl-, or -CHR3-alkenyl-;

 \mathbf{R}_1 is selected from the group consisting of:

-aryl;

20

-alkenyl;

-R₄-aryl; and

-(CH₂)₁₋₁₀—C≡CH;

R₂ is selected from the group consisting of:

-hydrogen;

25

-alkyl;

-alkenyl;

-aryl;

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-heteroaryl;
                                  -heterocyclyl;
                                  -alkyl-Y-alkyl;
                                  -alkyl-Y-alkenyl;
 5
                                  -alkyl-Y-aryl; and
                                  - alkyl or alkenyl substituted by one or more substituents selected
                                  from the group consisting of:
                                           -OH;
                                           -halogen;
10
                                           -N(R_3)_2;
                                           -CO-N(R_3)_2;
                                           -CO-C<sub>1-10</sub> alkyl;
                                           -CO-O-C<sub>1-10</sub> alkyl;
                                           -N_3;
15
                                           -aryl;
                                           -heteroaryl;
                                           -heterocyclyl;
                                           -CO-aryl; and
                                           -CO-heteroaryl;
20
                          R<sub>4</sub> is alkyl or alkenyl, which may be interrupted by one or more
                          -O- groups;
                          each R<sub>3</sub> is independently H or C<sub>1-10</sub> alkyl;
                          each Y is independently -O- or -S(O)_{0-2};
25
                          \mathbf{n} is 0 to 4; and
                          each R present is independently selected from the group consisting of C<sub>1-10</sub>
                          alkyl, C<sub>1-10</sub> alkoxy, hydroxy, halogen and trifluoromethyl;
                          or a pharmaceutically acceptable salt thereof.
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